

CRITICAL THINKING FOR ECOLOGICAL EDUCATION IN ENGLISH DISCOURSE

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Development of critical thinking is one of the most important aspects of ecological education for students. This means application of certain question categories for better understanding and learning of educational material and use received knowledge in practice.

At acquaintance with a new educational material you have to pay attention on studied before by recalling facts, terms, main concepts etc. There are used the following key words such as: what, who, when, where, why; to choose, to name, to determine, to remember, to show, to tell etc. They are used in the questions:

- What is ...?
- How can you explain...?
- Can you name three types...?

For example, studying the educational material on general ecology course it's necessary to pay attention on determination of the main studied terms and answer the questions:

- What is ecology?
- Can you name three types of interrelations in biosphere?
- Name the main sources of bio-contamination.

The next stage in studying of bio-contamination is demonstration of understanding facts and ideas by comparison, interpretation, classification, explanation of main conceptions. The key words that are used are: to compare, to paraphrase, to show, to illustrate etc. Next questions must be put there:

- How do you compare...?
- What is the main idea...?
- What statements support the fact of...?

In our case there may be the next questions:

- Can you explain interdependence between increasing of environment waste level and deforesting?
- What is the main idea of Kyoto protocol?
- Paraphrase in your own words the term "industrial ecologization".

The third level of information learning is directed to practical application of received knowledge on the advanced stages of topic studying. In this case use of the following key words is carried out: to use, to apply, to build, to choose, to identify, to organize, to simulate etc. You may use the following questions:

- Demonstrate your own comprehension of....
- How would you apply received information attached to investigation...?
- What facts will you choose to show...?

For example, in studying of certain material on ecology there must be useful the following questions:

- What will ignorance of over the norm of air emission lead to?
- What examples of environment pollution can you give?
- How can they solve the problem of rivers pollution?

The fourth level is analysis of studied material, research, information grouping etc. The key words: to analyze, to classify, to distinguish, to research, to divide etc. There may be used the following questions:

- Can you systemize the following...?
- What connection is found out between...?
- What conclusions may be made from...?

For example,:

- Examine extension of pollution in atmosphere after Chernobyl catastrophe.
- Analyze the level of environment pollution in Ukraine.
- Divide the territory of Europe by degree of lithosphere pollution.

The fifth level may be determined as synthesis of received knowledge and studied material, information resume by connecting elements in new models or patterns. There will be the following key words: to adapt, to formulate, to imagine, to represent, to improve, to propose etc. There may be the following useful questions:

- What changes can you propose to decide ...?
- How can you estimate results of...?
- What must be made to decrease (increase)...?

In our case there may be the following questions:

- Formulate algorithm of pollution income in atmosphere.
- What can you propose for improving of ecological situation in Ukraine?
- Estimate effectiveness of existing technologies of water treating.

Estimation of studied material, presentation of individual thoughts by acceptance or non-acceptance of information, applying of studied material for the following research or investigation must be named as the sixth stage of development of critical thinking. The following key words for this chapter are: to make a conclusion, to recommend, to prove, to highlight etc.:

- Do you agree with the statement...?
- Can you estimate the importance of the following ...?
- What significance do presented data have for...?

For example,

- What methods may be recommended for a rational using of water resources?
- Do you support Kyoto protocol idea?
- Prove appropriateness of existing standards establishment of immission limit of pollution matter.

Introduced classification allows not only remember informational material but understand the importance of certain questions and their applying in solving of complex tasks under conditions of uncertainty in future practical activity of specialists-ecologists.